CLAIMS

1. A method of transmitting a burst signal when the burst signal is transmitted from a transmitting station to a receiving station at a transmission power value and/or transmission rate determined in accordance with a state of a radio channel between said transmitting station and receiving station in a mobile communication system, wherein:

it is determined as to whether or not the burst signal is to be transmitted based on a comparison result between a criterion previously determined in accordance with the state of the radio channel and/or a transmission waiting state of said signal, and the state of the radio channel between the transmitting station and receiving station; and

the burst signal is transmitted from the transmitting station to the receiving station when it has been determined that the burst signal is to be transmitted.

2. The method of transmitting a burst signal as claimed in claim 1, wherein:

said criterion is determined based on the state of the radio channel.

3. The method of transmitting a burst signal as claimed in claim 1 or 2, wherein:

the determination as to whether or not the burst signal is to be transmitted is performed further depending on the transmission waiting state of the burst signal.

4. The method of transmitting a burst signal as claimed in claim 3, wherein:

said criterion is determined depending on the transmission waiting state of the burst signal.

5. The method of transmitting a burst signal as claimed in any of claims 1 through 4, wherein:

the determination as to whether or not the burst signal is to be transmitted is performed further depending on performance required for transmitting the burst signal.

6. The method of transmitting a burst signal as claimed in claim 5, wherein:

said criterion is determined depending on the performance required for transmitting the burst signal.

7. The method of transmitting a burst signal as claimed in claim 5 or 6, wherein:

at least one of the transmission power value and transmission rate of the burst signal to be transmitted is determined further depending on the performance required for transmitting the burst signal.

8. The method of transmitting a burst signal as claimed in any of claims 1 through 7, wherein:

said criterion is expressed as a reference transmission power value and/or reference transmission rate, and, it is determined as to whether or not the burst signal is to be transmitted based on the comparison result between the reference transmission power value and/or reference transmission rate and transmission power value and/or transmission rate determined in accordance with the state of the radio channel.

9. The method of transmitting a burst signal as claimed in any of claims 1 through 8, wherein the state of the radio channel comprises not only the state of the radio channel between the transmitting station and receiving station to which the burst signal is addressed but also the state of a radio channel with another receiving station.

10. The method of transmitting a burst signal as claimed in claim 9, wherein said criterion is a reference total power value, and bursts which can be transmitted are selected from a plurality of burst signals in a manner such that a total of transmission power values of the plurality of burst signals does not exceed the reference total power value.

11. The method of transmitting a burst signal as claimed in claim 10, wherein burst signals are selected from the plurality of burst signals in a predetermined order, and a total of transmission power values is obtained, and, then, when said total does not exceed the reference total power value, it is determined that the thus-selected burst signals can be transmitted.

12. A transmitting device in a mobile communication system in which a burst signal is transmitted to a receiving station at a transmission power value and/or transmission rate determined in accordance with a state of a radio channel with the receiving station, comprising:

transmission permission criterion determining means determining a transmission permission criterion of the burst signal;

determining means determining as to whether or not the burst signal is to be transmitted based on a

comparison result between the transmission permission criterion determined by said transmission permission criterion detecting means, and the state of the radio channel with the receiving station; and

transmission control means transmitting the burst signal to the receiving station when it has been determined by said determining means that the burst signal is to be transmitted.

13. The transmitting device in a mobile communication system as claimed in claim 12, wherein:

said transmission permission criterion determining means determines the transmission permission criterion based on the state of the radio channel with the receiving station.

14. The transmitting device in a mobile communication system as claimed in claim 12 or 13, wherein:

a determination result by said transmission permission criterion determining means further depends on a transmission waiting state of the burst signal.

15. The transmitting device in a mobile

communication system as claimed in claim 14, wherein:

said transmission permission criterion determining means determines the transmitting permission criterion further depending on the transmission waiting state of the burst signal.

16. The transmitting device in a mobile communication system as claimed in any of claims 12 through 15, wherein:

a determination result by said determining means further depends on performance required for transmitting the burst signal.

17. The transmitting device in a mobile communication system as claimed in claim 16, wherein:

said transmission permission criterion determining means determines the transmission permission criterion further depending on the performance required for transmitting the burst signal.

18. The transmitting device in a mobile communication system as claimed in claim 16 or 17, comprising:

transmission power determining means determines

the transmission power value of the burst signal to be transmitted based on the performance required for transmitting the burst signal as well as the state of the radio channel.

19. The transmitting device in a mobile communication system as claimed in any of claims 12 through 18, wherein:

said transmission permission criterion determining means determines a reference transmission power value as the transmission permission criterion; and

said determining means determines as to whether or not the burst signal is to be transmitted based on the comparison result between the reference transmission power value determined by said transmission permission criterion determining means and the transmission power value determined in accordance with the state of the radio channel.

20. The transmitting device in a mobile communication system as claimed in claim 16 or 17, comprising a transmission rate determining means determining the transmission rate of the burst signal to be transmitted based on the performance required for transmitting the burst signal as well as the state of the radio channel.

21. The transmitting device in a mobile communication system as claimed in any of claims 12 through 18, wherein:

said transmission permission criterion determining means determines a reference transmission rate; and

said determining means determines as to whether or not the burst signal is to be transmitted based on the comparison result between the reference transmission rate value determined by said transmission permission criterion determining means and the transmission rate value determined in accordance with the state of the radio channel.

22. The transmitting device in a mobile communication system as claimed in any of claims 12 through 18, wherein:

said transmission permission criterion determining means determines a reference transmission power value and a reference transmission rate; and said determining means determines as to whether or not the burst signal is to be transmitted based on the comparison result between the reference transmitting power value and reference transmission rate value determined by said transmission permission criterion determining means and the transmission power value and transmission rate value determined in accordance with the state of the radio channel.

23. The transmitting device in a mobile communication system as claimed in any of claims 12 through 22, wherein said determining means makes the determination in consideration of not only the state of the radio channel between the transmitting station and receiving station to which the burst signal is addressed but also the state of a radio channel with another receiving station.

24. The transmitting system in a mobile communication system as claimed in claim 23, wherein:

said transmission permission criterion determining means determines a reference total power value as the transmission permission criterion; and

said determining means selects bursts which can be transmitted from a plurality of burst signals in a manner such that a total of transmission power values of the plurality of burst signals does not exceed the reference total power value.

25. The transmitting system in a mobile communication system as claimed in claim 24, wherein:

said determining means selects burst signals from the plurality of burst signals in a predetermined order, and a total of transmission power values is obtained, and, then, when said total does not exceed the reference total power value, said determining means

determines that the thus-selected burst signals can be transmitted.

26. A method of distributing information to a mobile set in a mobile communication system in which communication is performed between a base station and the mobile set, wherein:

one or a plurality of base stations are determined to perform communication with the mobile set;

information to be distributed to the mobile set is distributed to the thus-determined one or plurality of base stations; and

each base station transmits the thus-distributed information to the mobile set.

27. The method of distributing information in a mobile communication system as claimed in claim 26, wherein:

the one or plurality of base stations to perform communication with the mobile set are determined based on a state of a radio channel with the mobile set.

28. The method of distributing information in a mobile communication system as claimed in claim 26 or 27,

wherein:

the one or plurality of base stations to perform communication with the mobile set are determined based on performance required for transmission of the information to be distributed to the mobile set.

29. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 28, wherein:

the one or plurality of base stations to perform communication with the mobile set are determined based on a transmission waiting state of information to be distributed in each base station.

30. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 29, wherein:

the information to be distributed to the mobile set is distributed to the thus-determined plurality of base stations without duplication.

31. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 29, wherein:

a part or all of the information to be distributed to the mobile set is copied, and the information to be distributed to the mobile set is distributed to the thus-determined plurality of base stations with duplication of the part or all of the information.

32. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 31, wherein:

a larger amount of the information is distributed to a base station of the thus-determined plurality of base stations which has a smaller amount of information in a transmission waiting state.

33. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 31, wherein:

a larger amount of the information is distributed to a base station of the thus-determined plurality of base stations which has a better state of the radio channel with the mobile set.

34. The method of distributing information in a

mobile communication system as claimed in any of claims 26 through 31, wherein:

amounts of distributing of the information to the thus-determined plurality of base stations are determined based on an amount of information in a transmission waiting state and a state of the radio channel with the mobile set in each base station.

35. The method of distributing information in a mobile communication system as claimed in claim 34, wherein:

the information is distributed to the thus-determined plurality of base stations in a manner such that a base station having a better state of the radio channel with the mobile set may have a larger amount of information in a transmission waiting state.

36. The method of distributing information in a mobile communication system as claimed in any of claims 26 through 35, wherein:

when a state of information piled up in a transmission waiting state in each base station becomes a predetermined state, a part or all of the information in a transmission waiting state is collected; and

the thus-collected information is re-distributed to one or a plurality of base stations as information to be distributed.

37. The method of distributing information in a mobile communication system as claimed in claim 36, wherein:

the collected information is discarded if a time for which the information is piled up without being transmitted to the mobile set is more than a predetermined time when the information is collected.

38. An information distribution control device performing information distribution control for a mobile set in a mobile communication system having a base station and the mobile set, comprising:

base station determining means determining one or a plurality of base stations to perform communication with the mobile set; and

information distributing means distributing information to be distributed to the mobile set to the thus-determined one or plurality of base stations,

each base station being able to transmit the information distributed by said information distributing means to the mobile set.

39. The information distributing control device as claimed in claim 38, wherein:

said base station determining means determines the one or plurality of base stations to perform communication with the mobile set based on a state of a

radio channel with the mobile set.

40. The information distributing control device as claimed in claim 38 or 39, wherein:

said base station determining means determines the one or plurality of base stations to perform communication with the mobile set based on performance required for transmission of the information to be distributed to the mobile set.

41. The information distributing control device as claimed in any of claims 38 through 40, wherein:

said base station determining means determines the one or plurality of base stations to perform communication with the mobile set based on a transmission waiting state of the information to be distributed in each base station.

42. The information distributing control device as claimed in any of claims 38 through 41, wherein:

said information distributing means distributes the information to be distributed to the mobile set to the thus-determined plurality of base stations without duplication.

43. The information distributing control device as claimed in any of claims 38 through 41, wherein:

said information distributing means copies a part or all of the information to be distributed to the mobile set, and distributes the information to be distributed to the mobile set to the thus-determined plurality of base stations with duplication of the part or all of the information.

44. The information distributing control device as claimed in any of claims 38 through 43, wherein:

said information distributing means distributes a larger amount of the information to a base station of the thus-determined plurality of base stations which has a smaller amount of information in a transmission waiting state.

45. The information distributing control device as claimed in any of claims 38 through 43, wherein:

said information distributing means distributes a larger amount of the information to a base station of the thus-determined plurality of base stations which has a better state of the radio channel with the mobile set.

46. The information distributing control device sa claimed in any of claims 38 through 43, wherein:

said information distributing means determines amounts of distributing of the information to the thus-determined plurality of base stations based on an amount of information in a transmission waiting state and a state of the radio channel with the mobile set in each base station.

47. The information distributing control device as claimed in claim 46, wherein:

said information distributing means distributes the information to the thus-determined plurality of base stations in a manner such that a base station having a better state of the radio channel with the mobile set has a larger amount of information in a transmission waiting state.

48. The information distributing control device as claimed in any of claims 38 through 47, further comprising information collecting means which, when a state of information piled up in a transmission waiting state in each base station becomes a predetermined state, collects a part or all of the information in the transmission waiting state,

said information distributing means re-distributing the thus-collected information to one or a

plurality of base stations as information to be distributed.

49. The information distributing control device as claimed in claim 48, further comprising:

information discarding means discarding the collected information if a time for which the information is piled up without being transmitted to the mobile set is more than a predetermined time when the information is collected.

50. A transmitting device in a mobile communication system in a receiving device in the mobile communication system which transmits a burst signal transmitted from a transmitting station at a transmission power value and/or a transmission rate determined in accordance with a state of a radio channel, comprising:

reception quality measuring means measuring a reception quality from a received signal;

reception-end reference power determining means determining a reception-end reference power in accordance with the measured reception quality;

a signal intensity detector detecting the state of the radio channel;

reception-end permission determining means determining whether or not the transmitting station should transmits the burst signal, based on a comparison result

between the reception-end reference power and the state of the radio channel; and

means transmitting this determination result to the transmitting station.